(No Model.)

W. H. STRATTON.

AUTOMATIC FIRE EXTINGUISHER.

No. 306,662. Patented Oct. 14, 1884.

FIG. 1.

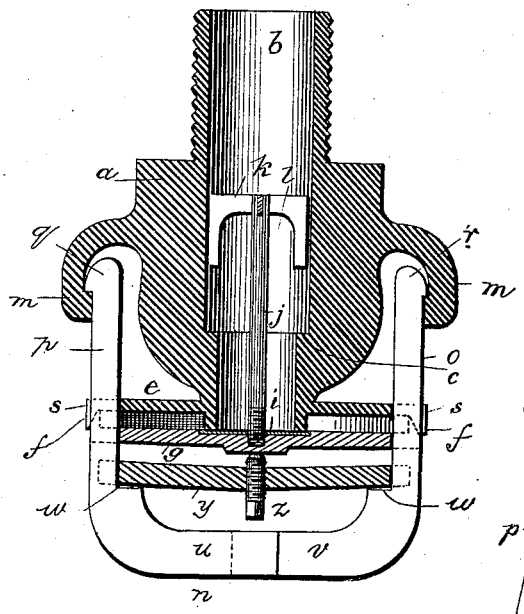


FIG. 2.

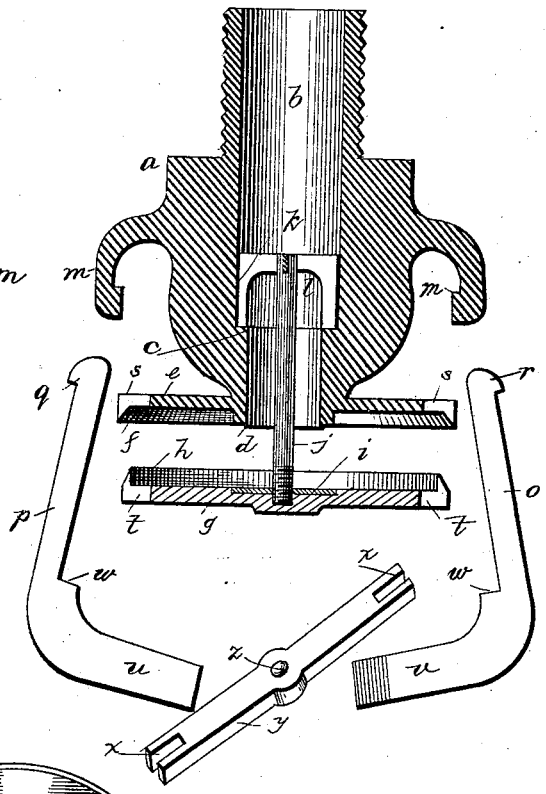
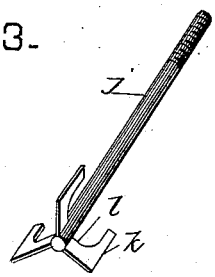


FIG. 3.



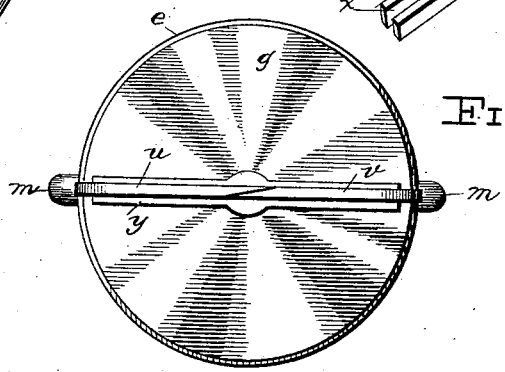


FIG. 4.

WITNESSES.

Geo. M. Finckel.

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INVENTOR.

William H. Stratton

by atty Wm. N. Finckel

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. STRATTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO STEPHEN R. SMITH, OF SAME PLACE.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 306,662, dated October 14, 1884.

Application filed October 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. STRATTON, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Distributers for Automatic Fire-Extinguishers, of which the following is a full, clear, and exact description.

This invention relates to the class of fire-extinguishing apparatus now commonly supplied as fixtures in factories, mills, and other buildings in connection with the water-supply thereto, and which is operated by an abnormal and dangerous increase of temperature to flood the building or any portion of it in which the danger exists. Such apparatus usually comprises distributing nozzles or roses for discharging the fire-extinguishing element—such as water or gases—which nozzles are normally sealed or closed by some combination therewith of a solder fusible at a dangerous temperature indicative of an incipient conflagration, and hence operate automatically at the outset of a fire to discharge an extinguishing element into the building or part of it in danger.

In my invention I employ a separable yoke jointed with solder fusible at a dangerous rise of temperature, and engaging a fixed part of the distributer, and receiving independently of the soldered joint the thrust of the valve or closing-plate holding device, whereby the pressure of the confined fluid or gas is borne by the yoke itself rather than either directly or remotely by its solder-joint, and when the distributer is open the whole of the yoke and valve holding mechanism is entirely disconnected from the distributer without leaving any obstruction to the complete diffusion of the water or gas.

The invention consists in the details of construction, as hereinafter specifically set forth and claimed.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a vertical section of a closed or sealed distributer illustrating my invention. Fig. 2 is a similar view open. Fig. 3 is a perspective view of the valve-stem, and Fig. 4 is a bottom plan view of the distributer.

The shell *a*, of approved size and shape, and adapted to be connected to a water or gas supply pipe, has a fluid or gas way, *b*, shouldered interiorly at *c*, and its discharge end or mouth is provided with an annular lip or valve-seat, *d*, and a flat circular plate, *e*, provided with an annular lip or flange, *f*, the several functions of which will be presently stated.

g is a flat circular plate provided with a rim or flange, *h*, to fit within the lip or flange *f* of the plate *e*. This plate *g* has in it a recess to receive a soft-metal disk, *i*, which, when the distributer is closed, fits on the seat *d*, and serves as a packed valve to close the distributer. The disk or plate *g* is connected to the shell by a stem, *j*, extending into the waterway, and having therein at its end wings *k*, which engage the shoulder *c* to hold the plate when the distributer is open, as indicated in Fig. 2. These wings are made quite thin, of rigid material, and are cut away at *l* from around the stem to present the least possible obstruction to the free exit of the fluid, the fluid reuniting almost immediately upon its passing the near edge of the wings, and passing out in a stream unbroken save by the stem—a condition I have found quite desirable in this class of devices. I do not, however, limit my invention to this one form of valve-stem, but may substitute for the wings a cross-bar or the like. Hooks *m m* project laterally from the shell *a* below its discharge end, and entirely free and away from the same. These hooks are engaged by the yoke *n*, to hold the distributer-closing device seated on the mouth of the distributer. This yoke consists of right and left members *o p*, having hooked ends *q r*, which engage the hooks *m m*, and said members are arranged edgewise in registering slots *s t* in the edges of the plates *e g*, with their hooked ends in engagement with the hooks *m m*, and having their meeting ends *u v* extending across the outer face of the plate *g*. These ends of the members *o p* are beveled, as indicated most plainly in Fig. 4, and when the distributer is to be sealed the yoke members are united by their beveled ends being connected by a film of some solder fusible at a dangerous rise of temperature. The members *o p* of the yoke are each provided with a shoulder, *w*, against which rests and bears the bar *y*, the forked ends *x x* of which embrace the mem-

bers *o p*. This bar receives the temper-screw *z*, by which the plate *g* and its contained valve are strained or forced up to close the distributer. Now, it will be seen that the strain of the screw and the pressure of the confined fluid or gas are taken off the solder-joint entirely and placed upon the shoulders *w* of the yoke; hence said joint is wholly relieved of tension, and its integrity, and consequently that of the closure, is unimpaired. The engagement of the hooks and the fit of the members *o p* in the slots in plates are loose, although secure, so as to obviate any possibility of the parts sticking when they are to be released. When the solder joint is melted, the gravity of the parts, even without the assistance of the pressure upon the plate *g*, will cause the yoke and bar to drop off from and wholly clear the distributer, as indicated in Fig. 2; hence the outcoming fluid has an unobstructed outlet from the plates. The plates *e* and *g*, being flat and opposite, and having the rims *f h*, respectively, will impart a twofold direction to the fluid, one sending part to the ceiling and the other to the floor, somewhat after the nature of reflection.

What I claim is—

1. The combination of the shell provided with lateral hooks back of the outlet, a valve to close such outlet, a straining-bar to seat such valve, and a yoke engaging said hooks, and separable from them and into its constituent parts by undue heat, and provided with shoulders to receive and sustain the straining-bar, substantially as described.

2. The combination, with the shell having lateral hooks back of the outlet, of a laterally-extending circular flat plate provided with a peripheral flange in the plane of the outlet and slots in its opposite sides, a distributing-plate movably connected with said shell to close said outlet, also slotted in its edge to register with the slots in the other plate, a separable yoke extending through such slots and engaging the lateral hooks, a solder-joint in said yoke, and a straining-bar engaging shoulders on said yoke to hold the distributing-plate seated over and upon the outlet, all substantially as set forth.

In testimony whereof I have hereunto set my hand this 13th day of October, A. D. 1883.

WILLIAM H. STRATTON.

Witnesses:

WM. H. FINCKEL,

E. A. FINCKEL.